

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, listing, of claims in the specification.

LISTING OF CLAIMS:

Claim 1 (original) A pixel for an in-plane switching liquid crystal display, comprising:

a first structure on a substrate having a reflective surface with a nanometer scale roughness for light scattering and contrast enhancement;

a second structure on a first part of the first structure having a switch device thereof;

a liquid crystal layer above the second structure and a second part of the first structure; and

a third structure on the liquid crystal layer.

Claim 2 (original) The pixel of claim 1, wherein the first structure comprises:

a micro scattering layer on the substrate with the nanometer scale roughness; and

a reflective layer made of high reflective metal on the micro scattering layer and conformal to the micro scattering layer to thereby form the reflective surface.

Claim 3 (original) The pixel of claim 2, wherein the micro scattering layer comprises:

a conductor on the substrate; and

an insulator on the conductor with the nanometer scale roughness.

Claim 4 (original) The pixel of claim 2, wherein the micro scattering layer comprises:

a layer of crystalline seeds; and

an insulator on the layer of crystalline seeds with the nanometer scale roughness.

Claim 5 (original) The pixel of claim 1, wherein the second part comprises a plurality of reflectors having the reflective surface with the nanometer scale roughness.

Claim 6 (original) The pixel of claim 5, wherein the plurality of reflectors are bent.

Claim 7 (original) The pixel of claim 1, wherein the third structure comprises:

a color filter;

a scattering film between the color filter and the liquid crystal layer;

and

a polarizer above the color filter.

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Claim 8 (original) The pixel of claim 1, wherein the first structure further comprises a transparent region having a first area, and the second part comprises a second area of the reflective surface, with an area ratio of the first area to the second area ranged between 10% and 400%.

Claims 9-17 (canceled).

Claim 18 (original) A bottom plate for a pixel of an in-plane switching liquid crystal display, comprising:

a substrate;

a thin film transistor on the substrate;

a plurality of reflectors each including:

a micro scattering layer having a top surface with the nanometer scale roughness; and

a reflective layer on the micro scattering layer and conformal to the top surface to thereby form a reflective surface, wherein the reflective layer is made of a same metal of forming a gate of the thin film transistor;

a passivation covered on the plurality of reflectors; and

a conductor on the passivation and passing therethrough for connected to one of the plurality of reflectors.

Claim 19 (original) The bottom plate of claim 18, wherein the micro scattering layer comprises:

a conductor; and

an insulator on the conductor having the top surface with the nanometer scale roughness.

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Claim 20 (original) The bottom plate of claim 18, wherein the micro scattering layer comprises an insulator having the top surface with the nanometer scale roughness.

Claim 21 (original) The bottom plate of claim 18, wherein the micro scattering layer comprises:

a layer of crystalline seeds; and  
an insulator on the layer of crystalline seeds having the top surface with the nanometer scale roughness.

Claim 22 (original) The bottom plate of claim 18, further comprising a transparent region having a first area, and the plurality of reflectors having the top surface of a second area in total, with an area ratio of the first area to the second area ranged between 10% and 400%.